

Computational (geo) micromechanics

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Many applications require to understand processes in material microstructure as they determine the macroscopic behaviour.

Nowadays, mathematical simulation become an important tool for such understanding. The lecture contains formulation of problem of mechanical behaviour of geocomposites, as a model example, and discuss homogenization and upscaling of linear elasticity constants and homogenization of strength characteristics.

Beside this, the lecture also concerns efficient and robust iterative solvers as e.g. multigrid and Schwarz iterative methods.